[4910-13-P]

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2022-0007; Project Identifier 2018-CE-048-AD; Amendment 39-22002; AD 2022-07-14]

RIN 2120-AA64

Airworthiness Directives; Viking Air Limited (Type Certificate Previously Held by Bombardier Inc. and de Havilland, Inc.) Airplanes

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Final rule.

SUMMARY: The FAA is adopting a new airworthiness directive (AD) for certain Viking Air Limited (type certificate previously held by Bombardier Inc. and de Havilland, Inc.) Model DHC-6-400 airplanes. This AD was prompted by mandatory continuing airworthiness information (MCAI) originated by an aviation authority of another country to identify and correct an unsafe condition on an aviation product. The MCAI describes the unsafe condition as corrosion of the fuel system components located in the fuel gallery due to inadequate corrosion protection. This AD requires repetitively inspecting the fuel gallery for corrosion, rectifying any deficiencies, and accomplishing modifications to the fuel gallery system. The FAA is issuing this AD to address the unsafe condition on these products.

DATES: This AD is effective [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

The Director of the Federal Register approved the incorporation by reference of certain publications listed in this AD as of [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

ADDRESSES: For service information identified in this final rule, contact Viking Air Limited Technical Support, 1959 de Havilland Way, Sidney, British Columbia, Canada, V8L 5V5; phone: (North America) (800) 663-8444; fax: (250) 656-0673; email: technical.support@vikingair.com; website: https://www.vikingair.com/support/service-

bulletins. You may view this service information at the FAA, Airworthiness Products Section, Operational Safety Branch, 901 Locust, Kansas City, MO 64106. For information on the availability of this material at the FAA, call (817) 222-5110. Service information that is incorporated by reference is also available at https://www.regulations.gov by searching for and locating Docket No. FAA-2022-0007.

Examining the AD Docket

You may examine the AD docket at https://www.regulations.gov by searching for and locating Docket No. FAA-2022-0007; or in person at Docket Operations between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The AD docket contains this final rule, the MCAI, any comments received, and other information. The address for Docket Operations is U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue SE, Washington, DC 20590.

FOR FURTHER INFORMATION CONTACT: Joseph Catanzaro, Aviation Safety Engineer, New York ACO Branch, FAA, 1600 Stewart Avenue, Suite 410, Westbury, NY 11590; phone: (516) 228-7366; email: joseph.catanzaro@faa.gov.

SUPPLEMENTARY INFORMATION:

Background

The FAA issued a notice of proposed rulemaking (NPRM) to amend 14 CFR part 39 by adding an AD that would apply to certain serial-numbered Viking Air Limited (type certificate previously held by Bombardier Inc. and de Havilland, Inc.) Model DHC-6-400 airplanes. The NPRM published in the *Federal Register* on January 21, 2022 (87 FR 3238). The NPRM was prompted by MCAI originated by Transport Canada, which is the aviation authority for Canada. Transport Canada issued AD CF-2018-07, dated February 23, 2018 (referred to after this as "the MCAI"), to address an unsafe condition on certain serial-numbered Viking Air Limited Model DHC-6-400 airplanes. The MCAI states:

> There have been reports of corrosion affecting components of the fuel system that are located in the fuel gallery because of inadequate corrosion protection. This condition affects only aeroplanes operating on floats.

> The effects of corrosion-related damage to fuel system components have included fuel leaks, electrical arcing, loss of fuel boost pump function and erroneous fuel quantity readings. Inaccurate fuel quantity indication and loss of fuel boost pump function can lead to fuel starvation followed by loss of engine power. Electrical arcing in the fuel gallery and loss of electrical bonding between fuel system components increases the risk of fire.

The MCAI requires repetitively inspecting the fuel gallery for corrosion, rectifying any deficiencies, and accomplishing modifications to the fuel gallery system. You may examine the MCAI in the AD docket at https://www.regulations.gov by searching for and locating Docket No. FAA-2022-0007.

Discussion of Final Airworthiness Directive

Comments

The FAA received one comment on the NPRM from an individual. The commenter supported the NPRM without change.

Conclusion

These products have been approved by the aviation authority of another country and are approved for operation in the United States. Pursuant to the FAA's bilateral agreement with this State of Design Authority, it has notified the FAA of the unsafe condition described in the MCAI referenced above. The FAA reviewed the relevant data, considered the comment received, and determined that air safety requires adopting this AD as proposed. Accordingly, the FAA is issuing this AD to address the unsafe condition on these products. This AD is adopted as proposed in the NPRM.

Related Service Information under 1 CFR Part 51

The FAA reviewed Viking DHC-6 Twin Otter Service Bulletin No. V6/0044, Revision B, dated September 13, 2021. The service information specifies incorporating multiple design improvement modifications in the fuel gallery.

The FAA also reviewed Temporary Revision No. 241, dated July 27, 2021, to the Viking DHC-6 Inspection Requirements Manual, PSM 1-6-7. Items 15.(1) and 15.(2) of this service information specify rinsing and inspecting the entire fuel gallery for corrosion; removing corrosion; reapplying any protective finishes; and removing and

replacing any damaged components. The temporary revision updates the fuel gallery inspection to include airplanes with a new fuel probe (Modification (MOD) 6/2395).

This service information is reasonably available because the interested parties have access to it through their normal course of business or by the means identified in the ADDRESSES section.

Other Related Service Information

The FAA reviewed the following technical bulletins, which contain instructions for the different modifications to components in the fuel gallery:

- Viking DHC-6 Twin Otter Technical Bulletin No. TBV6/00034, Revision NC, dated October 16, 2013 (MOD 6/2267);
- Viking DHC-6 Twin Otter Technical Bulletin No. TBV6/00084, Revision A, dated May 26, 2017 (MOD 6/2299);
- Viking DHC-6 Twin Otter Technical Bulletin No. V6/00099, Revision NC, dated December 23, 2016 (MOD 6/2389);
- Viking DHC-6 Twin Otter Technical Bulletin No. TBV6/00094, Revision NC, dated November 1, 2016 (MOD 6/2390);
- Viking DHC-6 Twin Otter Technical Bulletin No. V6/00100, Revision NC, dated February 20, 2017 (MOD 6/2393); and
- Viking DHC-6 Twin Otter Technical Bulletin No. V6/00152, Revision NC, dated January 29, 2021 (MOD 6/2464).

Costs of Compliance

The FAA estimates that this AD affects 4 airplanes of U.S. registry.

The FAA estimates the following costs to comply with this AD:

Estimated costs

Action	Labor Cost	Parts Cost	Cost per airplane	Cost on U.S. operators
Inspect fuel gallery	3 work-hours X $85 per hour = $255	Not applicable	$255 per inspection cycle	$1,020 per inspection cycle
MOD 6/2267 – Fuel boost pump EMI filter relocation	16 work-hours X $85 per hour = $1,360	$4,762	$6,122	$12,244 (for 2 affected airplanes)

MOD 6/2299 – Improved fuel boost pump	17 work-hours X $85 per hour = $1,445	$42,290	$43,735	$131,205 (for 3 affected airplanes)
MOD 6/2389 – Electrical Bonding Fuel System Manifold Drain Valve	18 work-hours X $85 per hour = $1,530	$572	$2,102	$8,408 (for 4 affected airplanes)
MOD 6/2390 – Fuel probe, improved mating electrical connection	20 work-hours X $85 per hour = $1,700	$2,129	$3,829	$11,487 (for 3 affected airplanes)
MOD 6/2393 – Fuel system manifold – drain valve	8 work-hours X $85 per hour = $680	$225	$905	$3,620 (for 4 affected airplanes)
MOD 6/2464 - Fuel pressure switch replacement	10 work-hours X $85 per hour = $850	$3,953	$4,803	$14,409 (for 3 affected airplanes)

On-Condition Costs

The extent of corrosion damage found during the inspections may vary significantly from airplane to airplane. The FAA has no way of determining how much corrosion damage may be found on each airplane, the cost for repairing corrosion damage on each airplane, or the number of airplanes that may require repair.

Authority for This Rulemaking

Title 49 of the United States Code specifies the FAA's authority to issue rules on aviation safety. Subtitle I, section 106, describes the authority of the FAA Administrator. Subtitle VII: Aviation Programs, describes in more detail the scope of the Agency's authority.

The FAA is issuing this rulemaking under the authority described in Subtitle VII, Part A, Subpart III, Section 44701: General requirements. Under that section, Congress charges the FAA with promoting safe flight of civil aircraft in air commerce by prescribing regulations for practices, methods, and procedures the Administrator finds necessary for safety in air commerce. This regulation is within the scope of that authority

because it addresses an unsafe condition that is likely to exist or develop on products identified in this rulemaking action.

Regulatory Findings

This AD will not have federalism implications under Executive Order 13132. This AD will not have a substantial direct effect on the States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government.

For the reasons discussed above, I certify this AD:

(1) Is not a "significant regulatory action" under Executive Order 12866,

(2) Will not affect intrastate aviation in Alaska, and

(3) Will not have a significant economic impact, positive or negative, on a substantial number of small entities under the criteria of the Regulatory Flexibility Act.

List of Subjects in 14 CFR Part 39

Air transportation, Aircraft, Aviation safety, Incorporation by reference, Safety.

The Amendment

Accordingly, under the authority delegated to me by the Administrator, the FAA amends 14 CFR part 39 as follows:

PART 39 - AIRWORTHINESS DIRECTIVES

1. The authority citation for part 39 continues to read as follows:

Authority: 49 U.S.C. 106(g), 40113, 44701.

§ 39.13 [Amended]

2. The FAA amends § 39.13 by adding the following new airworthiness directive:

2022-07-14 Viking Air Limited (Type Certificate Previously Held by Bombardier Inc. and de Havilland, Inc.): Amendment 39-22002; Docket No. FAA-2022-0007; Project Identifier 2018-CE-048-AD.

(a) Effective Date

This airworthiness directive (AD) is effective [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

(b) Affected ADs

None.

(c) Applicability

This AD applies to Viking Air Limited (type certificate previously held by Bombardier Inc. and de Havilland, Inc.) Model DHC-6-400 airplanes, serial numbers 845 through 957, certificated in any category.

(d) Subject

Joint Aircraft System Component (JASC) Code 2800, Aircraft Fuel System.

(e) Reason

This AD was prompted by mandatory continuing airworthiness information (MCAI) originated by an aviation authority of another country to identify and correct an unsafe condition on an aviation product. The MCAI describes the unsafe condition as corrosion of fuel system components located in the fuel gallery due to inadequate corrosion protection. The FAA is issuing this AD to prevent corrosion-related damage to fuel system components, which could lead to fuel leaks, electrical arcing, loss of fuel boost pump function, and erroneous fuel quantity readings. This unsafe condition, if not corrected, could result in fuel starvation with loss of engine power and increased risk of an in-flight fire with consequent loss of airplane control.

(f) Compliance

Comply with this AD within the compliance times specified, unless already done.

(g) Required Actions for Airplanes Operating on Floats on the Effective Date of This AD

(1) Within 50 hours time-in-service (TIS) after the effective date of this AD or within 3 months after the effective date of this AD, whichever occurs first, and thereafter at intervals not to exceed 125 hours TIS, do the following actions:

(i) Remove all fuel gallery covers and rinse the fuel gallery with water.

(ii) Inspect the fuel gallery for corrosion and, if there is any corrosion, take all necessary corrective actions before further flight by following Item D.15(2) of Special Inspection 3 in Temporary Revision No. 241, dated July 27, 2021, to the Viking DHC-6 Inspection Requirements Manual, PSM 1-6-7.

(2) Within 12 months after the effective date of this AD, install the modifications applicable to your airplane serial number by following the Accomplishment Instructions, sections A. through E., in Viking DHC-6 Twin Otter Service Bulletin No. V6/0044, Revision B, dated September 13, 2021 (Viking SB V6/0044, Revision B).

(h) Required Actions for Airplanes Modified to Operate on Floats after the Effective Date of This AD

Within 12 months after the airplane is modified to operate on floats, regardless of whether the landing gear is later modified back to non-float landing gear, install the modifications applicable to your airplane serial number by following the Accomplishment Instructions, sections A. through E., in Viking SB V6/0044, Revision B.

(i) Alternative Methods of Compliance (AMOCs)

(1) The Manager, New York ACO Branch, FAA, has the authority to approve AMOCs for this AD, if requested using the procedures found in 14 CFR 39.19. In accordance with 14 CFR 39.19, send your request to your principal inspector or local Flight Standards District Office, as appropriate. If sending information directly to the manager of the certification office, send it to the attention of the person identified in paragraph (j)(1) of this AD.

(2) Before using any approved AMOC, notify your appropriate principal inspector, or lacking a principal inspector, the manager of the local flight standards district office/certificate holding district office.

(j) Related Information

(1) For more information about this AD, contact Joseph Catanzaro, Aviation Safety Engineer, New York ACO Branch, FAA, 1600 Stewart Avenue, Suite 410, Westbury, NY 11590; phone: (516) 228-7366; email: joseph.catanzaro@faa.gov.

(2) Refer to Transport Canada AD CF-2018-07, dated February 23, 2018, for more information. You may examine the Transport Canada AD in the AD docket at https://www.regulations.gov by searching for and locating Docket No. FAA-2022-0007.

(k) Material Incorporated by Reference

(1) The Director of the Federal Register approved the incorporation by reference of the service information listed in this paragraph under 5 U.S.C. 552(a) and 1 CFR part 51.

(2) You must use this service information as applicable to do the actions required by this AD, unless the AD specifies otherwise.

(i) Viking DHC-6 Twin Otter Service Bulletin No. V6/0044, Revision B, dated September 13, 2021.

(ii) Temporary Revision No. 241, dated July 27, 2021, to the Viking DHC-6 Inspection Requirements Manual, PSM 1-6-7.

(3) For service information identified in this AD, contact Viking Air Limited Technical Support, 1959 de Havilland Way, Sidney, British Columbia, Canada, V8L 5V5; phone: (North America) (800) 663-8444; fax: (250) 656-0673; email: technical.support@vikingair.com; website: https://www.vikingair.com/support/service-bulletins.

(4) You may view this service information at the FAA, Airworthiness Products Section, Operational Safety Branch, 901 Locust, Kansas City, MO 64106. For information on the availability of this material at the FAA, call (817) 222-5110.

(5) You may view this service information that is incorporated by reference at the National Archives and Records Administration (NARA). For information on the availability of this material at NARA, email: fr.inspection@nara.gov, or go to: https://www.archives.gov/federal-register/cfr/ibr-locations.html.

Issued on March 25, 2022.

Lance T. Gant, Director,
Compliance & Airworthiness Division,
Aircraft Certification Service.
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